

Schools, Education and Social Exclusion

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Editorial Note

Jo Sparkes is a research officer in the Department of Social Policy at the London School of Economics. As part of its ESRC-funded activities, CAES commissioned Jo, whilst she was working at the Centre for Educational Research at the LSE, to review the literature and research evidence on education and social exclusion especially during the schools years. She is now working on the ESRC research project “ Competitiveness, Cohesion and the Policy Environment “ which is directed by Dr Mark Kleinman at the LSE and others.

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Abstract

A review of research evidence suggests that low levels of educational attainment are crucial in generating and sustaining social exclusion. Test scores at school are the most effective predictor of many adult outcomes. School attendance and soft skills are also important. Reviewing the factors accounting for the variance in educational attainment, it is evident that combinations of social disadvantage powerfully affect school performance with up to 75% of school variation in 16 year old attainment at GCSE associated with pupil intake factors. But school factors can raise attainment by up to 14 GCSE points for average pupils. Hence schools are a good place to improve children's skills. Research suggests that higher per pupil spending, smaller class sizes and teacher quality in schools all seem to make a difference and some have most impact on disadvantaged pupils. However an approach which focuses solely on the improvement of average school performance is likely to be a less effective means of reducing social exclusion than an approach which creates incentives that rewards improvement among the least able. Other factors such as the behaviour and hiring decisions of employers also require attention if improved educational performance is to provide high pay offs.

1. Introduction

Whilst the concept of social exclusion is not new, its widespread use in British social policy discourse is. Despite the increasing use of the term, there is no single definition of social exclusion and the term is used with a variety of definitions in mind. For some, social exclusion is merely a new way to refer to existing concepts such as poverty or unemployment (Levitas, 1997; Paugam, 1993). However, a number of commentators have adopted a broader definition centred on a notion of 'integration', rather than a sole concern with the distribution of resources. From this perspective social exclusion is a process of long term non-participation in the economic, civic, and social norms that integrate and govern the society in which an individual resides (Burchardt *et al.*, 1998). It is conceptually differentiated from poverty and deprivation, primarily by having a focus on the process of disengagement. Indeed, tracing this process from source to outcome emerges as a key issue (Room, 1995), and as a result social exclusion perspectives recognise the dynamism of individuals' trajectories over time. In addition the term moves the unit of analysis from the individual, to socially structured disadvantage. Maintaining this focus helps to ensure that social exclusion theories and policies do not fall solely back on deficit theories focused on the pathology of individuals or groups of individuals (Leney, 1999).

Operationalising such a definition of social exclusion in Britain in the 1990s, Burchardt *et al.* (1998) highlight the importance of participation in five dimensions of activity – production, consumption, wealth, political and social. As the authors highlight, an individual's ability to participate in these various spheres of activity is affected by a wide range of factors, which interact with one another. These are outlined as;

- “an individual's own characteristics, such as his/her health and education;
- events in the individual's life such as job loss;
- the characteristics of the area in which the individual lives such as transport links;
- the social, political, civil economic institutions of society such as racial discrimination laws.”

In contemporary modern societies, the human capital an individual possesses affects the probability of participation in these spheres of life. However the literature is predominantly focused on the role of education in relation to production defined in terms of labour market participation. Less is known of the role education plays in relation to the other spheres.

As section two of this paper outlines, the knowledge, skills and qualifications an individual acquires during compulsory education are important facets of an individual's human capital. In the third section a summary of the state of knowledge about educational attainment in compulsory schooling system is provided. The following three sections analyse the factors accounting for the variance in educational attainment and outcomes, both in and outside of schools. Finally some broader questions on the role of education as a strategy to reduce social exclusion are explored.

2. Compulsory educational attainment and adult life chances

2.1 Educational attainment, employment and earnings

Recent analysis of National Child Development Study data, (Hobcraft, 1998) identified educational test scores during compulsory schooling as “the most frequent and effective childhood predictor of adult outcomes”. Research suggests that individuals who leave school with low levels of educational attainment are at a higher risk of experiencing social exclusion as adults, with those who lack basic literacy and numeracy skills at particular risk.

Educational attainment is strongly related to unemployment and earnings across the developed world. In general unemployment rates decrease as the educational attainment of workers increases. In the UK, the unemployment rate is 13% for 25 to 64 year olds with primary and lower secondary education, 8.3% for those with upper secondary education and 3.9% among those with non university tertiary and university level education (OECD, 1997). This trend is apparent across countries with widely different dispersions of educational attainment in their populations and labour market profiles. Basic literacy and numeracy attainment have a particularly profound effect on labour market participation and unemployment. Evidence (Bynner and Parsons, 1997; Moser, 1999) suggests that the experience of those with poor literacy and very poor numeracy skills is particularly marked. In terms of labour market access only 1 in every 50 jobs is open to those without Basic Skills Agency “entry level skill” and only 50% of jobs are open to those with skills only at entry level (Moser, 1999).¹ Subsequently adults with poor skills are up to five times more likely to be unemployed, compared with those with

1 The Basic Skills Agency entry level skill is broadly equivalent to level two in the National Curriculum in schools, BSA level one is approximately equivalent to National Curriculum level 4 (the expected level for 11 year olds) and BSA level two is equivalent to GCSE Grade A-C (Moser, 1999).

average skills (Bynner and Parsons, 1997; Ekinsmyth and Bynner, 1994). The labour market difficulties associated with poor basic skills emerge during the early stages of working life. Analysis of the 1970 British Birth Cohort Study (Ekinsmyth and Bynner, 1994) revealed that at the age of 21, poorly skilled male school leavers were more likely to be unemployed, and had experienced twice as many months of unemployment, as their counterparts with average basic skills. Poor literacy and numeracy skills were found to be of equal importance in explaining the higher levels of unemployment. However other work on basic skills has suggested that mathematical attainment is of particular importance in terms of maintaining employment in the modern economy (Bynner and Parsons, 1997). Poorly skilled female school leavers experienced less unemployment than their male counterparts, tending to follow mixed trajectories, experiencing a variety of jobs, training and education; typically interspersed with unemployment or to leave the labour market due to early family formation. By the age of 21, one third of females with poor literacy defined themselves as engaged in house care.

When making judgements on the value of employing individuals, employers require easily accessible and comparable data. Educational qualifications most commonly fulfil this requirement. Hence there is a link between qualifications, labour market participation and earnings. There is strong evidence that a lack of qualifications is associated with an increased risk of unemployment (Dolton and O'Neil, 1996). Individuals increasingly require some form of qualifications to access the modern labour market. In 1986, only 62% of jobs required some form of qualifications but, by 1997 the proportion had risen to 69% (Green *et al.*, 1998). The importance of qualifications as an explanatory factor in unemployment is known to be increasing over time (Arulampalam and Stewart, 1995). In terms of attainment at 16, Robinson and Oppenhiem (1998) suggest that the

“possession of five or more lower grade GCSEs significantly reduces the chances of exclusion post 16. Possession of one or more higher grade GCSEs has a further positive effect.”

Their analysis of Youth Cohort Study data is shown in Table 1. They go on to advocate the proportion of 16 year olds failing to gain at least 20 GCSE points² in a maximum of seven subjects (including English and Maths) as a key indicator of educational exclusion. They claim that this is the clearest cut off point in terms of the relationship between GCSE attainment and post-16 participation in education, training employment and/or progression to an intermediate vocational qualification. According to the authors, progression to intermediate qualifications is significant, as this is the minimum level of qualification, providing some leverage in the labour market.

Table 1: Main activity of 16 year olds by GCSE attainment, 1996

	F/T Ed	Gov. train	F/T job	*Excluded
5+ GCSE A-C	92	3	2	3
1-4 GCSE A-C	68	13	9	10
5+ lower grades	49	24	12	15
1-4 lower grade	34	22	13	30
No grades	26	20	17	38
Total	71	11	7	9

Note: *Excluded includes those out of work/unemployed and inactive but also a small number (1-2%) who are in part-time work.

Source: Robinson and Oppenheim, (1998) YCS cohort 8, sweep 1.

The link between qualifications and earnings is well documented and exemplified by analyses using the Labour Force Survey. Among men, the attainment of 1-4 GCSEs at grade A-C increases earnings by 17%, 5 or more GCSEs at grade A-C increases earnings by 41%, 2 or more A levels increases

- 2 A GCSE point score is the sum of an individuals GCSE grades calculated on the following basis: A*=8, A=7, B=6, C=5, D=4, E=3, F=2, G=1. GCSE short courses are equivalent to half a GCSE at the same grade. GNVQ attainments are also included in point scores on the following basis (DfEE, circular number 11/98).

Grade	Part One GNVQ		Intermediate GNVQ	Foundation GNVQ
	Intermediate	Foundation		
Distinction	15	8	30	16
Merit	12	6	24	12
Pass	10	3	20	6

earnings by 67% and a degree increases earnings by 111% compared with a base of no qualifications. Once again, basic skill attainment has a profound effect on earnings. Low earnings are far more likely if one has poor basic skills than if one has good skills.

In NCDS analysis (Bynner and Parsons, 1997) low income was defined as under £200 per week for men and under £150 per week for women. According to these definitions, twice as many men with very low numeracy skill levels earned a low wage by comparison with men in the highest numeracy group. With reference to literacy, 42% of those with very low or low literacy were earning low incomes in comparison with 24% of those with good literacy. Evidence suggests that numeracy skill has a particularly powerful effect on the likelihood of low adult annual earnings. Special analysis undertaken in the International Adult Literacy Survey (see Moser, 1999) found a correlation of 0.28 between annual earnings and literacy and a correlation of 0.38 with numeracy (see Table 2). The importance of numeracy to earnings is reiterated in analysis of the NCDS sample at the age of 37. Of those who left school at 16, 30% of women with competent numeracy and low literacy earned below £150 per week. The comparable figure among women with very low numeracy levels and competent literacy was 58% (Bynner and Parsons, 1997). The significance of basic mathematical skill in explaining wage differentials is also found in US evidence (Murnane *et al.* in Halsey *et al.*, 1997).

Table 2: Distribution of annual earnings for people with different levels of literacy and numeracy

Annual Earnings	Literacy		Numeracy	
	Low level	High level	Low level	High level
Up to £4,6000	20	11	26	6
£4,600-£9,000	29	12	29	10
£9,000-13,000	27	16	22	17
13,000-19,200	17	20	15	21
Over £19,200	7	40	7	46
Total	100	100	100	100

Source: IALS in Moser (1999)

Less is known of the significance of educational attainment in relation to participation in the spheres of wealth, political and social activity.

However basic skill attainment is associated with participation in the savings and political spheres. NCDS analysis (Bynner and Parsons, 1997) shows that by the age of 37, one-third of those with very low skill levels did not own their own home, compared with under 10 per cent of men and women with good skills. Furthermore, NCDS analysis also indicates that substantial proportions of those with poor skills do not participate in general election voting. Literacy skill is more powerful than numeracy in this respect – 32% of men and 30% of women with low literacy skill failed to vote in the 1987 General Election compared with 22% of men and 17% of women across the NCDS sample. In addition educational attainment is inversely related to poor reported general health and depression as measured by the Malaise Inventory (Whitty *et al.*, 1999; Bynner and Parsons, 1997).

2.2 Other educational outcomes are important too

Success in formal examinations and tests is only one of a number of educational outcomes. At the individual level other outcomes include attitudinal and personal qualities, behaviour and school attendance. Evidence suggests that non-cognitive educational attainments are also significant in relation to later adult outcomes. Recent research on employability (Kleinman *et al.*, 1998; Moss and Tiley, 1995) has emphasised the importance of individuals' personal qualities and 'softer skills' in accessing the labour market. Moss and Tiley, (1995) identify two clusters of soft skills:

“the first, interaction, has to do with ability to interact with customers, and co-workers. This cluster includes friendliness, teamwork, ability to fit in, spoken communication skills, and appearance and attire. A second cluster we call motivation, taking in characteristics such as enthusiasm, positive work attitude, commitment, dependability and willingness to learn.”

According to the authors soft skills are measured neither by educational attainment nor standardised test scores. In Moss and Tiley's sample of American employers, 86% included soft skills in their list of most important hiring criteria and almost half put soft skills first in that list. Surveys of employers in the UK have also stressed the importance of soft skills. Employers are evidently dissatisfied with the responses of the education system in these respects. A report by Industry in Education (1996) on employability concluded that among employers,

“there was unanimous agreement that far more needs to be done before school leaving age to develop the personal qualities required in adult life and employment.”

However soft skills have yet to be adequately defined and their importance, relative to formal qualifications, for different groups of people and at different stages in the life cycle is unknown.

Evidence also suggests that school attendance is an important factor with small but significant independent effects on early adult outcomes. The associations between truancy and educational attainment are well documented. Persistent truants tend to obtain significantly lower examination scores. The Youth Cohort Study indicated that 38% of persistent truants (those who reported truanting for weeks at a time) did not attain any GCSEs compared with 3% of non-truants. Occasional truants also gain significantly lower examination scores than those who report never having truanted (Bosworth, 1994). Early research (Gray *et al.*, 1980) suggested that the difficulties encountered by truants, particularly in the labour market were a result of their depressed examination performance and lack of qualifications at the end of their schooling; and that thereafter their problems were no greater than others with similarly poor qualifications. However, more recent research (Hibbert *et al.*, 1990) has demonstrated that the occupational outcomes of former truants are distinct from other poor achievers:

“Truancy is a predictor of employment problems and of a more severe kind than will be experienced by others who share the disadvantaged backgrounds and low attainment, which typify the truant.”

According to Hibbert *et al.* (1990) at the age of 23, truants have lower status occupations, less stable career patterns and are up to twice as likely to be unemployed as non truants. Interestingly, when in work former truants' income is no lower, but if the number of children in the household is taken into account they are considerably less well off. These differences remained statistically significant after controlling for the effects of social background, educational ability, poor attendance due to other reasons (e.g. sickness) and qualifications on leaving school. Preliminary analysis indicates the independent effect of truancy on adult outcomes is even more marked for those individuals who reported truanting at the age of 11, in addition to truanting at age 16.

Other evidence (Hibbert *et al.*, 1990b) suggests, by the age of 23, truants are up to three times more likely to have experienced marital breakdown, up to ten and half times more likely to smoke heavily (over 30 cigarettes a day) and up to three times as likely to suffer depression as non-truants of similar background, ability, and educational attainment. Interestingly, holding these factors constant, truancy has no statistically significant impact on age of the

first child or patterns of alcohol consumption. Truancy has also been linked with offending behaviour. Home Office research findings of self-reported offending amongst 14–25 year olds in England and Wales found that the odds of offending were almost three times as high among truants as those not truanting (Grahame and Bowling, 1995, cited in SEU, 1998). These findings suggest that schools contribute to individuals' human capital formation, and reduce their vulnerability to social exclusion as adults, in ways which are neither assessed nor reflected in national assessments and examinations.

3. Educational attainment and outcomes – the current state of play

Given the associations between adult life chances and school outcomes, current levels of educational attainment are not encouraging. Although general levels of attainment are rising, a significant number of young people truant from school and leave school without attaining qualifications or basic and personal skills. In terms of GCSE attainment, there have been year-on-year improvements in the proportion of young people attaining five GCSEs at grades A-C. At present around 45% of young people obtain qualifications at this level. However the proportion leaving with no GCSE passes has remained stable since the late 1980s at approximately 1 in 12 young people. In 1996/7 the figure was 7.7%, over three-quarters of this group were not entered for any examinations (DfEE, 1997). In terms of average GCSE point score, there has been a national improvement of 2.8 points in the period from 1993-1997. Improvements have not been evenly distributed across the ability range. In this period, the top decile group improved by 4.4 points whilst the bottom 10% experienced a deterioration of 0.1 points (West and Pennell, 1999). Hence, in recent years the gap between the highest and lowest attaining pupils has grown. This polarisation has been attributed, at least in part, to the introduction of league tables focusing on high attainers as performance indicators (West and Pennell, 1999; Pearce and Hillman, 1998). This has created powerful incentives, that have encouraged some schools to focus attention and resources on pupils who are on the borderline of achieving five GCSEs at grades A-Cs, as these are published in the DfEE's examination performance tables, at the expense of lower attainers (Kleinman *et al.*, 1998).

In terms of basic skill attainment, a recent study found that 15% of school leavers had literacy problems and 20% had numeracy problems that would place them below the minimum employability requirements even for the least qualified jobs (National Commission on Education, 1995). Given the

significance of basic skill attainment for adult life chances, there have been calls both in the UK and the US for exit examinations testing basic skills, which all students would be required to pass prior to leaving school or graduating (Kleinman *et al.*, 1998; Betts, 1998). Poor prior acquisition of basic skills, particularly literacy, have also been associated with exclusion and truancy from school (OFSTED, 1995, 1996). Little is known of current levels of attainment in relation to 'soft' skills. However, in the DfEE skills survey nearly three times as many employers complained about the lack of management, communication, personal skills (such as motivation) and IT skills as complained about basic skill levels.

The 1998 Social Exclusion Unit report on truancy and exclusion summarises research on truancy rates. Official figures suggest that rates are stable with approximately 1% of school time lost to unauthorised absence in secondary schools and 0.5% in primary schools (DfEE, 1997 in SEU, 1998). The report highlights the fact that official figures underestimate truancy levels, as they do not include truancy which occurs post-registration or that which is condoned by schools including cases where pupils have been removed from school rolls. O'Keefe (1993) provides a more detailed insight into truancy levels in a survey of over 37,000 pupils in the final two years of compulsory schooling. Overall, 30.5% of pupils surveyed admitted to playing truant in some form over the previous half term. This figure included large numbers of occasional truants (defined as truanting less than once a month) and small but significant proportions of frequent truants. Of those surveyed 1.5% truant on a daily basis, 4.7% truant 2-4 times a week, 8.2% truant once a week and 13.6% truant 2-3 times in a month.

4. Variations in compulsory educational attainment

4.1 *Schools can make a difference*

Research suggests non-school factors are a more important source of variation in educational attainment than differences in the quality of education that students receive. Thomas and Mortimore (1996) have reported that between 70-75% of school variation in 16 year old attainment in GCSEs is explained by pupil intake factors. However there is broad scale consensus that schools do make a difference, which is both educationally and statistically significant. Reynolds *et al.* (1996) conclude from their review of school effectiveness research that schools have an independent effect of approximately 8-15% on student attainment, with the effect of primary schools being greater than that of secondary schools. However at the extremes, school effectiveness research (Thomas and Mortimore, 1996) has

demonstrated that having taken background factors into account, schools can lift GCSE results in the order of 14 GCSE points for pupils with average levels of prior attainment. As the authors highlight, this is broadly equivalent to the difference between six Grade Bs rather than Grade D GCSE passes.

Non-school and school factors are known to vary in their pattern of relationship with achievement in different subject areas for example. Background factors are far more important determinants of English than Mathematics attainment and are of relatively little importance in accounting for variations in Science results. The proportion of total variance accounted for by correlation with background factors (age, free school meals eligibility, fluency in English and gender) ranged from 13% in English, 7.5% in Maths and only 2.4% in Science attainment. Concurrently, the percentage of variation attributable to schools ranged from 5.3% for English, 13.8% for Mathematics and 20% for Science (Sammons *et al.*, 1997).

4.2 Non-school factors and educational attainment

Strong associations between non-school factors and low levels of educational attainment have long been recognised in the sociological and education literature. However the recent research focus on the ‘school effect’ has diverted attention from these links. In order to isolate the value added by schools, ‘appropriate’ allowance is made for socio-economic variables and/or prior attainment to control for differential school intakes. As a result, inequalities in final educational outcomes arising from background factors may be at risk of becoming acceptable and even regarded as inevitable. Although the associations between different non-school factors and educational attainment are well documented, the factors that are *causal*, and not simply associated with attainment, have yet to be identified. A number of key background/non-school variables are associated with educational attainment in the literature. These are:

- Pupils’ personal characteristics: prior attainment, gender, health;
- Socio-economic: low income (eligibility to free school meals), parental unemployment, social class (father’s occupation) and housing (e.g. overcrowding);
- Educational: parents’ educational attainment – qualifications and basic skills;
- Family structure: family size, lone parent status, institutional care;
- Ethnicity/Language: ethnic group, fluency in English;
- Other: parental interest / involvement / practice, locally based factors.

It is widely accepted that there is high level of interdependence between many of the factors highlighted above and that the cumulative impact of risk factors may be greater than the simple sum of separate factors. Educational

priority studies have shown that multiple disadvantage has devastating implications for educational attainment. This is demonstrated in Table 3. As the number of risk factors experienced by the pupil increases, so to does the risk of falling into the bottom 25% of the age group at age 11 (verbal reasoning band three³) and the chance of being rated as having some kind of disturbed behaviour. Non-school factors and their interactions are now examined.

Table 3: Percentage of secondary pupils experiencing different number of educational priority criteria by measures of educational outcomes and behaviour

Number of factors	% of pupils in verbal reasoning band Three	% of pupils with disturbed behaviour
0	10.8	5.6
1	16.7	9.4
2	25.5	14.7
3	32.2	20.4
4	38.6	25.1
5	49.1	28.6
6	61.5	32.7
7	91.7	42.3

Source: Sammons *et al.* (1981).

4.2.1 PUPILS' PERSONAL CHARACTERISTICS

Prior attainment

At the pupil level, prior attainment explains the greatest proportion of variance in educational attainment. This is thought to explain up to 59% of total variance in pupils' academic test scores (Thomas and Smees, 1997) – more than social economic background variables. However, there is a high correlation between socio-economic variables and prior attainment; the former is used as a proxy for prior attainment when prior attainment is not

3 From 1972 to 1988, pupils in the final year of primary school took a verbal reasoning test as part of the secondary school transfer process. Pupils were assigned to one of three bands on the basis of teachers judgements guided by test score results. The Verbal Reasoning band was used as a crude guide to educational outcome as it was strongly predictive of latter public examination performance (Sammons *et al.*, 1981).

available (Levacic and Hardman, 1999). Even at the earliest stages of educational assessment when pupils are aged seven, prior attainment accounts for 26–43% of variance in national assessment results (Sammons and Smees, 1998). Prior attainment on the sub scale of ‘sound’ may provide the best predictor of Key Stage One results, highlighting “the value of developing children’s phonological knowledge at a young age.” (Sammons and Smees, 1998). Variations in cognitive development/attainment are evident during early infancy. Analysis of BCS70 data (Feinstein, 1998) demonstrates a social class gradient in cognitive development at 22 months which increases at 42 months and at five years. The proportion of individual variance in educational attainment accounted for by variations in genetic intelligence at birth is unknown and has been the subject of vigorous academic debate. Environmental factors are known to affect cognitive development prior to birth. Maternal smoking and poor nutrition during pregnancy, for example, have been associated with low levels of latter educational attainment among children. The effects appear to be relatively small. Regardless of their origins innate variations fail to offer a sufficient explanation of poor educational attainment, as high proportions of children with normal IQ achieve only low levels of educational attainment (Rutter and Madge, 1976).

There is a broad consensus that intervention in the early years is among the most effective means of improving educational performance and outcomes. Such interventions are likely to be an important facet of strategies that help to lift children out of cycles of deprivation and onto positive trajectories. Waldfogel (1998) provides a useful summary of the effectiveness of early childhood interventions in the US. The evidence is promising and suggests that well designed programmes are successful at raising educational attainment and other positive adult outcomes. The most successful programmes are defined by early and intensive intervention, and include a follow-through component in the later stages of the child’s development. In the UK, evidence of the effects of pre-school provision is mixed, particularly for children who participate in day care programmes before their first birthday. In general, research studies suggest that in comparison to no experience, all forms of pre-school experience have a positive impact on attainment in national assessment tests, taken at age seven (Sammons and Smees, 1998; Daniel, 1995). In addition, pre-school attendance has been found to improve ‘school commitment’, reducing the risk of disaffection during the latter stages of schooling and delinquency (Slyva, 1994; Shepard and Farrington, 1995). However, the quality of provision appears to be a crucial determinant of the effects on educational attainment. Definitions of high quality provision are subject to debate, but frequently refer to small group size, high adult- child ratios, a balanced curriculum and trained staff.

If pupils do fall behind, they have few opportunities to make up lost ground in the current education system. Such pupils tend to fall further behind their peers and may give up altogether the attempt to catch up (Mortimore *et al.*, 1983). Subsequently, transient events in a pupil's life may have an unnecessarily high impact in the longer term. Specific intervention projects, which offer pupils opportunities to accelerate their educational development, allowing children to catch up may be beneficial. One such project is the reading recovery programme. This involves training teachers to recognise reading problems among young disadvantaged children, and has been positively evaluated using controlled experimental methodology (Sylva and Hurry, 1995).

Gender

In national curriculum tests and at higher level GCSE grades, girls outperform boys. For example, in 1997 49% of girls achieved five or more higher grade GCSEs compared with 40% of boys (DfEE, 1997). However, at the lower levels of GCSE attainment, the gender gap is smaller in percentage point terms. In 1997 8.8% of boys and 6.5% of girls failed to gain any GCSE qualifications (DfEE, 1997). Evidence of a gender effect on the propensity to truant is mixed. Some evidence suggests that boys are slightly more likely to truant than girls, whilst other results have shown that there are no differences (Bosworth, 1994; O' Keefe, 1993). These findings have significant implications. If truancy is not a male dominated phenomenon whilst juvenile crime is, the notion of a causal link between the two, needs to be treated with considerable caution. As Pearce and Hillman (1998) suggest, "factors other than gender are more important in explaining disaffection and underachievement".

Health

Physical illness is associated with high levels of absence and low levels of educational attainment (Rutter *et al.*, 1976). As poor health is correlated with low-income and poor housing conditions, this is likely to explain, in part, the strength of correlation between disadvantage and attainment. In a review of urban education, the Office for Standards in Education (1993) noted a prevalence of dental problems, speech disorders, ear, nose and throat disorders that did not always receive prompt treatment, as parents were unable to access the appropriate health services due to poor transport links for example. Hence, lack of access to one public service inhibits access to the human capital which is developed by the education service.

Recent school-based health interventions such as the healthy schools initiative and breakfast clubs explicitly recognise the link between health and

educational attainment. Findings from a local study of such an intervention have shown positive effects on attainment, attendance and bullying (McInnes and Toft, 1998).

4.2.2 SOCIO-ECONOMIC

Growing up dependent on an income support recipient/eligible for free school meals

Low income, as indicated by free school meal eligibility, is strongly correlated with low levels of educational attainment at all levels, from the age of seven upwards. Recent research (West et al., 1999) has shown the proportion of children dependent on income support recipients (at a local authority level) is very strongly correlated with levels of educational attainment. Analysis suggests that this indicator of need accounted for approximately 66% of variance in educational attainment at a local authority level. The strong correlation between low income and GCSE attainment is reiterated in analysis undertaken at school level (Levacic and Hardman, 1999). Low income is frequently conceptualised as an undifferentiated experience, and as Tabberer (1999) has highlighted the effect of temporary, as opposed to persistent poverty on educational attainment is little understood.

O' Keefe's research on self-reported truancy indicates free school meal eligibility has a significant but small effect on measurable truancy. However the correlation is weak (0.17) and this cannot account for more than 2% of variance in truancy rates between schools. In contrast the correlation between free meals and *absence* levels is much stronger, accounting for 42% of school level variance. This would include *authorised* and *unauthorised* absence. Dearden *et al.* (1997) also found household income had no effect on truancy levels. It is important to note that the decision not to attend may not be one taken independently by the child. Surveys suggest in some cases families/parents are aware of pupils' absence from school, and often condone it in order for children to take on caring responsibilities or to engage in illegal employment in order to maintain family incomes (O' Keefe, 1996; Galloway, 1985). This is likely to reflect lack of access to money and to affordable child care structures among such families. Fox (1995) suggests that 10% of all school absence results from children undertaking duties associated with their home. Research on truancy and part time work post-16 has shown that participation in part-time work significantly increases the probability of truancy for both males and females (Dustmann *et al.*, 1997).

Parental Unemployment / Employment

The relationship between parental unemployment and education is difficult to disentangle as adults are only eligible for income support (and hence their children eligible for free school meals) if they are unemployed and available

to work. Some evidence suggests that it is the loss of income which is important. Gregg and Machin (1997) report that in the absence of financial difficulties, the association between low educational attainment and paternal unemployment is significant, but small, for boys and non-significant for girls.

The effect of maternal employment on children's educational success appears to vary, according to the age of the child, the type of employment and in terms of different types of attainment. Analysing the effect of maternal employment on children's behavioural adjustment, reading and maths attainment, Joshi and Verropoulou (1999) concluded:

“Mother's employment while a child is under 1 shows limited signs of association with at least one sort of problem later on. At other ages under 5, there is no evidence for a negative effect, and as at the ages of 5 –17 at which these children were observed there are some signs of positive associations, possibly benefits.”

Examining parental employment patterns when children are aged between 13 and 15 and GCSE attainment, O'Brien and Jones (1999) also suggest that maternal employment has positive effects, particularly if the employment is undertaken on a part time basis. Results showed that children living in dual worker households where the mother was working part time were 70% less likely to gain low grades (all D-G grades or nil passes at GCSE) than children in households in which the father was the sole earner. They were also 53% less likely to attain low grades than children in dual worker households in which the mother worked on a full time basis.

Research evidence on the impact of workless households on educational attainment is also mixed. Joshi and Verroupoulou (1999) found that no earner families had adverse effects on maths attainment and one measure of behavioural adjustment (absence of anxiety). However in terms of reading attainment and the second measure of behavioural adjustment used in the analysis (absence of aggressive behaviour) the authors concluded that the results were more consistent with no effects. Qualitative research suggests that some form of household employment may be important to the acquisition of personal softer skills. Findings suggest that many pupils who grow up in work-less households are not exposed to working role models, and as a result fail to learn in the home about the behavioural aspects of work (Kleinman *et al.*, 1998).

Housing Tenure and Conditions

The associations between housing tenure, conditions and educational attainment are well established. Individuals living in council housing are less

likely to attain qualifications and are more likely to report playing truant than those living in other forms of accommodation (Bosworth, 1994). However it is important to note that this does not necessarily imply causality. On the basis of current research, it is unclear if social housing exerts an independent effect on educational attainment. Poor housing, in particular overcrowding, access to basic amenities, and temporary accommodation are also associated with lower educational attainment. Such conditions adversely effect upon a child's health, development and access to friends and social networks, which are likely to affect school attendance and performance. Homelessness more specifically has been examined by Whitty *et al.* Exploring the processes which translate homelessness into poor educational outcomes Whitty *et al.* (1999) highlight "the nature and organisation of current services and professional responses...were often as much part of the problem as the solution". The authors highlight a lack of formal policy mechanisms, to ensure the priority of the education of homeless children. Data derived from a survey of LEAs on the administrative arrangements relating to the education of homeless children, revealed high levels of confusion, inconsistency and a lack of clear lines of communication and responsibility. For example, homeless parents who elect to continue their child's education at their existing school may incur additional financial costs for transport.

4.2.3 EDUCATION

Parent's educational attainment

Parental education attainment has long been recognised as an important predictor of a child's educational attainment. The mother's level of educational attainment is particularly important in this respect. Dearden (1998) for example found that the probability of a woman undertaking a degree increases by 1.1 percentage point for every extra year of education undertaken by her mother. The association is particularly strong in terms of literacy attainment. Research at City University (Basic Skills Agency, 1993 in Moser, 1999) has shown that 60% of children in the lowest reading attainment group at age 10 had parents with low literacy levels, whilst only 2% had parents with high literacy scores. In contrast parental education is only weakly related to the likelihood of truancy from school (Bosworth, 1994). The means by which better educated parents confer advantage to their children, remains open to question. Research has highlighted the importance of parents' human, and social capital. Clearly if parents are unable to read, they are unable to assist their child's learning in this respect. Interventions that have increased parents' human capital along side that of the child, such as family literacy projects, have been favourably evaluated (Brooks et al., 1998).

Whitty et al. (1999) suggests that educated parents have higher levels of social capital and that this has a positive impact on their children's attainment.

4.2.4 FAMILY STRUCTURE

Growing up in a lone parent family

The evidence suggests that controlling for other variables, lone parenthood is non-significantly or only weakly associated with educational attainment (Gregg and Machin 1997). However some evidence has suggested the effect depends on the sex of the parent, and that living with just a father has a slight negative effect on attainment (Bosworth, 1994). When experienced in combination with other risk factors, notably low income, lone parenthood does increase the probability of low educational achievement (Mortimore *et al.*, 1983). The circumstances of family disruption are also relevant. The children of widows, for example, seem to experience fewer negative effects than do divorcees. Similarly the addition of a step parent into a family also appears to have negative effects (Kiernan, 1992). Parental circumstances are strongly associated with truancy and absence. Holding other factors constant, YCS analysis demonstrates that family structure is significantly related to the likelihood of truancy. Results show that individuals in two-parent families were the least likely to truant, followed by those who live with the mother, those who live with the father, and those living away from parents (Bosworth, 1994; Casey and Smith, 1995). Other studies have also found that behaviour such as school lateness and negative teacher evaluation appear to reflect family structure/disruption effects and not just economic factors (Featherstone *et al.*, 1992). Hence as Joshi and Verropoulou conclude:

“Family structure effects are generally more important for behavioural outcomes than cognitive attainment, at least when the family's economic resources are taken into account. “

Growing up in an institutional care placement or multiple foster places

Surveys show that over 75% of those who have been in local authority care gain no qualifications on leaving school – compared with 11% in the general school population within the same geographical areas. Furthermore over 80% of care leavers remain unemployed two and half years after leaving school compared with 9-16% within the general population (Biehal *et al.*, 1992; Garnnett 1992). Young people who experience multiple care placements are at an especially high risk of low attainment (Biehal *et al.*, 1992). The low levels of educational attainment among in-care children are primarily, though not entirely, accounted for by their traumatic backgrounds (Osborn and St Claire, 1987). However studies show that the experience of care tends to

compound the educational difficulties experienced by children in care. Contributing factors in this respect have been found to be: inadequate liaison between carers and schools, the prioritisation of welfare above educational concerns, disruption caused by placement moves, lack of transport to school, low priority given to education by social workers, low expectations and stigmatising treatment by teachers and bullying by peers (Carleen *et al.*, 1992; Fletcher-Campbell and Hall, 1990).

Growing up in a large family

Individuals with large numbers of siblings have a slightly higher probability of failing to gain qualifications at the age of 16 than others. In addition if they succeed in gaining qualifications they are likely to attain lower test scores (Bosworth, 1994). The association between large family size and low attainment is strongest in respect to reading and verbal intelligence, moderate in terms of mathematics ability and far weaker in respect of other forms of non-verbal intelligence, suggesting that lack of verbal interaction with adults may be the key factor (Wedge and Prosser, 1973). Research findings suggest that the effect of family size is dependent in part upon income. Wedge and Prosser (1973) for example, found that in the middle classes, only those children from a family with four or more siblings were adversely affected, whilst in working-class families children are progressively disadvantaged by each additional sibling. Birth order, the sex and ages of other siblings have also been associated with educational attainment. Dearden (1998) for example found that boys with fewer older siblings had better levels of attainment than boys further down the birth order. In addition, women with only brothers were found to have significantly higher levels of attainment. In terms of truancy males are more likely to truant when there are older siblings in the household, but the presence of younger siblings has no effect. For females the presence of older siblings has no effect whereas there is a weak but significant effect where young siblings are present (Dustmann, et al 1997).

4.2.5 ETHNIC BACKGROUND AND FLUENCY IN ENGLISH

There are no national data on the attainment of pupils from different ethnic backgrounds (DfEE, 1997). However research (Gipps and Gilborn, 1996) suggests that on average the attainment of Afro Caribbean pupils, and particularly boys, is low relative to other ethnic groups. Asian pupils attain almost as well, or better, than whites of the same class and gender. There are however substantial differences among Asian groups. Pupils of Indian origin consistently attain high levels whilst Bangladeshi and Pakistani pupils' average attainments are lower, and they are more likely to leave school without having acquired any qualifications. Patterns of attainment vary

considerably at LEA level. For example in the London borough of Tower Hamlets, Bangladeshi pupils now achieve higher average GCSE point scores than white and Afro Caribbean pupils. Summarising the research on progress Gipps and Gilbourn (1996) indicate the gap between ethnic minorities and white students widens during primary school years. However at secondary school this trend reverses for students from Asian and Chinese backgrounds, who tend to make better progress than their white counterparts. One explanation of such trends is that

“Bilingual learners may start school as low attainers (in verbal reasoning) but make substantial progress in language skills while attending secondary school.”

However differences between the *progress* of black and white pupils remains smaller and less consistent. Hence as pupils proceed through secondary schooling, some ethnic minorities narrow the attainment gap, but in general (with the exception of some inner London areas) fail to close it completely. The Social Exclusion Unit Report (1998) concludes ethnicity is not associated with the propensity to truant persistently.

4.2.6 OTHER

Parental Interest/Involvement/Practice

Recent analysis of NCDS data has identified parental interest in education as one of the factors most strongly related to educational attainment and adult outcomes (Feinstein and Symons, 1997; Hobcraft 1998). Feinstein and Symons (1997) found parental interest in schooling had a massive direct effect on children's attainment at 16, far greater than the direct effects of social class variables. Their results showed that in mathematics tests, the improvement of children between the ages of 11 and 16 whose parents exhibited high levels of interest was 15% greater than that of pupils whose parents exhibited no interest. In terms of reading attainment the difference was 17 per cent. Other NCDS analysis has shown that father's interest has a crucial and sizeable effect on the attainment of educational qualifications (Hobcraft, 1998). Findings must be treated with caution as analysis is based on teachers assessments of parental interest in education, and hence on perceptions rather than objective measures. Sammons (1998) suggests

“this variable is likely to reflect teacher perceptions, which may well be coloured by cultural factors...it may well be an indicator of socio-economic disadvantage...measurement problems are compounded by the decision to set the mothers or fathers interest at zero where the parent is absent. This means that this variable may well be picking up the impact of one parent family status.”

Direct evidence from parents suggests that very high proportions are interested in their child's education (Tizard, 1981; West *et al.*, 1997; Lareau, 1997).

A number of studies have highlighted the significance of parental involvement in their child's education and learning. Indeed parental involvement is the only non-school factor that is widely cited in the school effectiveness literature (Mortimore *et al.*, 1988). Despite the current enthusiasm for increasing parental involvement (DfEE, 1997) research findings as to its efficacy are somewhat mixed. Little is known of the ways in which parents are involved in their children's education – particularly outside the formal school setting. Numerous studies have focused on one measure of parental involvement yet this is unhelpful as parents can display their involvement in different ways. Differentiation is crucial as some types of involvement, such as use of parental helpers in the classroom have been found to be non-significant or negatively correlated with educational attainment (Sammons *et al.*, 1997).

Past research concerned with parental involvement has focused on a number of different issues. Some research has focused on parents' involvement as consumers/decision-makers in education. This would include parents' choice of school in the education 'quasi market' and participation on school governing bodies. Other studies have focused on home school communication for example newsletters, and parents evenings/meetings. High levels of contact and trust between parents and the school are associated with beneficial outcomes in the school improvement literature (Mortimore *et al.*, 1988). Other research has tended to focus on parents' role as educators – usually in specific curriculum areas such as reading and to a lesser extent mathematics. Studies have shown the amount of direct teaching or 'intellectual stimulation in the home' is highly correlated with children's attainment, particularly during early school years (Parkinson *et al.*, 1982). Considerable optimism about the efficacy of this form of involvement as a means of raising reading/educational attainment among disadvantaged pupils, was first generated by the experimental study known as the 'Haringey project' (Tizard *et al.*, 1982). The project took place over two years, during which time parents were encouraged by their child's teacher and home visitors to hear their child read. After the two-year intervention there were considerable differences in reading test scores. In the control classes, very few children scored at or above the test norm for the age group, whilst in the experimental class over 50% of the children scored above average. Subsequent research has however failed to confirm the efficacy of increasing this type of involvement as a means of improving attainment (e.g. Hannon, 1987). The success of the Haringey project may be attributable to the

home-visiting component of the programme (Hannon, 1987). Home visits were frequent and involved specific advice on good practice, and prescribed what parents should do. This draws attention to the issue of what parents actually do when listening to their children read. The type of parental input may be a crucial factor. Studies which have examined this issue suggest that the way in which parents interact with their children whilst listening to them read is significantly differentiated by the level of the parents' education (Greenhough and Hughes, 1998). This is in line with direct evidence from parents, which suggests that the majority recognise the importance of family support for educational attainment, but lack the confidence, and crucially the knowledge as to what they should do to help their child. When combined with time and family pressures, Tizard *et al.* (1981) noted that working class parents who lacked confidence found it particularly difficult to sustain involvement in their child's reading. Many parents report willingness to spend more time on learning activities with their children if teachers gave them more guidance as to what they should actually do. However contact with parents is given remarkably low status and little or no time allocation in a teacher's day and the training which teachers receive provides limited preparation for collaboration with parents (Hancock, 1997).

Other research has focused on parents' involvement as facilitators of education. This involves the provision of support for children's education through encouragement and an environment within which pupils can become good learners and benefit fully from teaching. Examples of this type of involvement include the provision of space and time for education within the family home life, positive parent child relationships and lack of conflict within the home. Recent research has highlighted the significance of parenting style. In their study in the London borough of Barking and Dagenham, O'Brien and Jones (1999) found that maternal praise was a powerful determinant of GCSE attainment at 16. The authors indicate that maternal praise, of children aged between 13 and 15, increased the odds of achieving high grades⁴ at GCSE by a factor of four and reduced the odds of achieving low grades by 72%. In two parent households, this variable emerged as the most important determinant of educational success. Joshi and Verropoulou (1999) also note that supportive parenting has a positive effect on children's vocabulary, whatever the family's economic situation. Work in the US, on variations in literacy attainment among pupils from low-income families, found that emotional and organisational dimensions of family life

⁴ O'Brien and Jones (1999) define high grades as five or more A*- C GCSE passes and low grades as all D -G / nil passes.

were strongly correlated with writing production. However these factors were negligible in terms of their relationship with other components of literacy – vocabulary, word recognition, and reading (Snow *et al.*, 1991). This suggests that different forms of parental involvement are differentially related to different areas of educational attainment. Parents may be involved in their children's attainment as role models. In this sense parents' own behaviour and attitudes may have an impact on the educational attainment of the child.

Research findings suggest that some, but not all, measures of parental involvement are differentiated by non-school factors. One study of both formal and informal parental involvement found no statistical differences in terms of social class as defined by father's occupation (West *et al.*, 1997). Differences were found in relation to mother's level of educational qualifications in terms of attendance of parent's evenings, informal contact with teachers, use of work books at home and private tuition. In a study comparing home school relationships in different communities, Lareau (1997) suggests that level of parental education, time, disposable income, child care, transportation, and work place flexibility are important factors affecting parents participation in their child's education. Lareau also stresses the significance of cultural capital, drawing attention to the importance of middle class parents' social networks as a source of information on schooling that parents utilised to build a family-school relationship. It is therefore important for research to clarify the relative importance of different types of involvement of mothers and fathers, for different areas of learning (e.g. reading, writing, speech), and at different stages of their children's lives. In addition more needs to be known of the involvement of different groups of parents and of the key factors which inhibit or foster involvement.

The literature has also highlighted the influence of parents' and pupils' wider social networks in their educational attainment. Research suggests that informal teachers, group leaders and mentors fulfil important roles when young people begin to negotiate independence from their parents (Hendry *et al.*, 1992). Interestingly, a high level of personal support from a trusted adult has been identified as a key success factor in a number of highly successful projects, which prevent exclusion among high risk groups (Pearce and Hillman, 1998, Sparkes and West, 1999). Other work has drawn attention to the considerable influence of peer groups as young people are establishing their own identities (Cullinford and Morris, 1997). Studies show that parental influence sharply decreases during adolescence due to the rising counter influence of peers. Peer groups emerge as 'surrogate families', and their influence is known to be more significant when the counter influences of the family are weak. Rich Harris (1999) has controversially argued that parents

have relatively little influence over their child's behaviour outside the home, and emphasises peer group relationships, focusing on ways in which children socialise each other collectively. A greater understanding of the significance of peer groups and of how and why they are important would be beneficial.

Locally based factors

The literature suggests that local factors such as limited work opportunities in the local labour market, racial tensions and local violence may impact negatively upon educational attainment and outcomes. Recent analysis of Youth Cohort Study (YCS) data (Bosworth, 1994) found that holding other factors constant, 'travel to work' area types did not play any consistent, significant role in creating different pupil attitudes to school. In addition, controlling for other factors, the probability of truancy was found to be highest in *high* wage and manufacturing areas. In contrast 'travel to work' area 'type' was related to examination performance. Individuals whose travel to work area types were in some sense disadvantaged were however, less likely to gain a examination score. The ranking running from highest to lowest performing areas was as follows:

- (1) high status growth areas;
- (2) high wage areas;
- (3) northern and midland metropolitan areas;
- (4) high unemployment areas;
- (5) service dominated areas;
- (6) low wage, low growth areas;
- (7) manufacturing dominated areas.

However the differences in absolute scores across the regions were not large. This suggests young peoples' expectations of work affect their educational attainment. Similar effects have been noted in the US (William Julius Wilson in Halsey *et al.*, 1997). In their review of the attainment of ethnic minority pupils Gipps and Gilborn (1996) suggest that racial harassment and violence may undermine young ethnic minorities pupils' educational attainments. Research in the US analysing levels of local violence, attainment and college attendance found that on average a moderate level of local violence reduced the likelihood of high school graduation by 5.1% per cent and lowered the likelihood of a student attending college by 6.9% (Grogger, 1997). The significance of interpersonal/social relations in the wider community is reiterated in the work of Coleman (1997) who concludes the success of Catholic schools reflects high levels of social capital and cohesion in Catholic communities.

4.3 School factors accounting for variance in educational attainment

Studies have highlighted the possibility of improvement in schools with disadvantaged pupils (DfEE, 1997). Case studies of schools with below average intakes who *succeed against the odds* emphasise the importance of leadership built on a team approach, a vision of success, careful use of targets, improved physical environment, common expectations about pupils behaviour and success and investment in good parent and community relations (National Commission on Education, 1996). However analysing the role of school improvement as a remedy for social exclusion, Mortimore and Whitty (1999) argue “*it cannot be assumed that such strategies will contribute to greater social inclusiveness*”. Reiterating the conclusions of Rutter in the *Fifteen Thousand Hours* study, the authors suggest

“If all schools performed as well as the best schools, the stratification of attainment of achievement by social class would be even more stark than it is now. This would happen because socially advantaged children in highly effective schools would achieve even more than they do now in less conducive environments and the gap between them and their less advantaged peers would increase.”

Plewis (1998) has argued that school improvement targets such as those in literacy and numeracy are counterproductive and may exacerbate inequality of attainment. He suggests that the targets create incentive structures which encourage teachers to concentrate on pupils most likely to reach the desired level, paying little or no attention to those who are at substantially lower levels. School exclusion, resources allocation, class size, the curriculum and market reforms are now examined in turn.

4.3.1 SCHOOL EXCLUSION

Exclusion is the ultimate sanction a school can employ against a pupil who is persistently disobedient, disruptive or violent. Exclusion may be permanent or fixed term (whereby a pupil is excluded for not more than 15 days in any one term). At an individual pupil level the longer-term consequences of school exclusion are often profound. For example students who are excluded from school in the final two years of compulsory education are two and a half times as likely not to participate in education, training or employment between the ages of 16 and 18, than those not excluded (SEU, 1999).

Of those who are excluded on a permanent basis, only 27% of primary age pupils and 15% of secondary pupils return to mainstream education (Parsons, 1996). Those not returning to school lose their right to full-time education and receive what is legally defined as ‘education otherwise’. The

nature of this provision is determined by the LEA. However, in the majority of cases young people attend Pupil Referral Units (PRU), receive home tuition, or attend further education colleges. The quality of education received by pupils in Pupil Referral Units has been seriously criticised in OFSTED Inspection reports (1995). Criticisms draw attention to the low standard of educational attainment, low expectations of pupils, poor quality of teaching and an absence of clear objectives in many PRUs. Consequently:

“Permanently excluded pupils and children who for other reasons do not have a school place are therefore at risk of educational failure, leading to unemployability and long term dependency on benefits; in short from a whole range of vocational, cultural and social opportunities.” (OFSTED, 1995)

However, for children in Pupil Referral Units in 1994/5 the cost per pupil was £4,300 compared to £2,500 for mainstream education; this amounted to double the cost for under 10% of the teaching time they would receive in school (Parsons, 1996).

Official figures show that there were 12,700 permanent exclusions in 1996/97 (DfEE, 1998). This compares with 2,910 in 1990/91. Actual figures may be even higher. One independent survey of LEAs for example suggests there were as many as 13,500 permanent exclusions in 1996/97 (Godfrey and Parsons, 1998 in SEU, 1998). Although the majority are from secondary schools, rates of exclusion from primary schools have risen rapidly – by over 500% during the 1990-1996 period (Parsons, 1998). In addition estimates from OFSTED (1996) suggest that there are approximately 100,000 fixed term exclusions from secondary schools annually. The rapid increase in rates of exclusion has been attributed to a number of factors including institutional factors and in particular to the publication of league tables as performance indicators. In a competitive climate with intense pressure on schools to meet demanding standards, schools may exclude less able students or those who disrupt other pupils learning in order to improve their league table position. The importance of institutional factors in explaining the increasing use of the exclusion sanction is reiterated in a survey of LEA Directors of Education; 8 per cent thought that the increase in exclusions was due to poorer discipline, whilst 42% attributed increases to levels of competition between schools (Gillborn, 1996).

Boys represent 83% of those permanently excluded (DfEE, 1998). Evidence on the background of those excluded indicates that 61% come from unemployed households (SEU, 1998). High proportions are from disturbed or disrupted home contexts including family break up, bereavement, illness, alcoholism and abuse (OFSTED, 1996). Young people in care are on average

10 per cent more likely to be excluded than their peers (SEU, 1998). Exclusion has particularly significant implications for this group of young people, as this frequently triggers a break down in their care placement (Pearce and Hillman, 1998). For those with special educational needs the risk of exclusion is roughly 6 per cent higher than others. This has been attributed at least in part to the funding systems for special educational needs. Stirling (1992) suggests that from the school's perspective, the process of exclusion is a speedier and more predictable process than the implementation of the lengthier assessment procedures leading ultimately to a 'statement' of Special Educational Needs (which results in additional resources to help meet the pupil's needs) under the 1981 Education Act. In addition he suggests that schools may be using the process of exclusion to speed up the allocation of additional SEN funding as in many cases the act of exclusion triggers the statementing process.

In 1996/97 the permanent exclusion rate for white pupils was 0.18%. However the rates for Black Caribbean, Black African and Black Other were 0.76%, 0.30% and 0.70% respectively (DfEE, 1998). Although the reasons for this are little understood, research has highlighted tension and conflict in relations between white teachers and Afro Caribbean pupils as a plausible explanation (Gipps and Gilborn, 1996). This is thought to explain the differences between excluded Afro Caribbean pupils and other excludees. Although the majority of excluded pupils were found to be evenly divided between average and below average ability, Afro Caribbean pupils who were excluded were more likely to have above or average ability but were generally described as under performing. They do not usually show disruptive behaviour from early in their school careers and show less evidence of deep-seated trauma. In addition OFSTED, (1996) found that exclusion is consistently associated with limited aspirations and expectations, poor relationships with other pupils, parents and teachers and pressure from other pupils to perform in ways that lead to conflict with authority.

Rates of exclusion are geographically uneven with the high levels in inner London, followed by outer London, metropolitan LEAs and finally county districts (DfEE, 1998). However while there is a correlation between the socio-economic context of the school and its exclusion rate using free school meals as an indicator of poverty (OFSTED, 1996), there are schools in very disadvantaged areas that maintain a very low rate of exclusion. Hence there are observable school and LEA effects on patterns of exclusion. A number of studies and inspection reports have noted the differences in the propensity of schools to exclude pupils:

“Schools practice with regard to exclusion varied to an unacceptable degree. Some schools were far too ready to exclude; others did so with extreme reluctance.” (OFSTED, 1996)

Similar variations are detected at a LEA level. For example a survey of LEAs undertaken by Parsons (1995) revealed that rates of exclusion in some LEAs were ten times higher than in others, a rate that could not be explained by socio-economic differences, suggesting a clear local authority effect.

The Government is committed to reducing exclusion rates by one third by 2002 (SEU, 1998). Measures announced to date include the development of behaviour support plans outlining local provision for pupils with behavioural difficulties, the commitment of additional resources to fund school based programmes which work to prevent exclusion, and the improvement of education for those who are excluded. In addition exclusion issues have been identified as a central focus in the Education Action Zone programme (SEU, 1998).

4.3.2 RESOURCES

LEA and school level expenditure

The debate on the effect of resources on student attainment and labour market outcomes is ongoing. This reflected in the oft cited US evidence. On the basis of a large scale meta-analysis Hanushek (1986) concluded that “there is no strong or consistent relationship between school resources and student performance”. He found that only 27% of 163 studies showed a positive and significant relationship between expenditure per pupil and learning outcomes. It is important to note the Hanushek’s methodology has been severely criticised and reanalysis of his sample of studies undertaken by Hedges *et al.* (1994) found a consistent and positive relationship between inputs and outcomes. Card and Krueger (1992) also conclude that increased per pupil expenditure results in higher earnings. In the UK there has been comparatively little research into the effects of financial resources on educational outcomes. Work that has been undertaken suggests there is no consistent relationship between LEA expenditure and pupils learning outcomes, nor their subsequent earnings (Dolton and Vignoles, 1996). However West *et al.* (1999) highlight that expenditure per pupil and examination results are confounded, as local authorities with higher proportions of children from disadvantaged backgrounds are allocated additional funding by central government and therefore spend more on education. Having controlled for the confounding effect of poverty West *et al.* demonstrate that educational spending per pupil is positively associated with educational attainment at the LEA level. Interestingly analysis undertaken by

Dearden *et al.* (1998) found that the effect of per pupil expenditure in secondary schools on female wages at age 23 is significant and quite large – “a 10% increase in this budget leads to a 3.1% increase in wages”. The effect of different school intakes on school processes has not been researched extensively in the UK. However Gerwitz (1998) provides an interesting comparison of the impact of different school intakes on management processes, resource allocation and teaching styles in two inner London schools.

Class Size

Econometric literature on class size has failed to find consistently positive effects. Large classes are frequently associated with better results reflecting the tendency for low attaining pupils to be placed in smaller classes (Dolton and Vignoles, 1996). Analysis of examination results and class size is further confounded as additional funding directed to poorer LEAs and schools is frequently used to reduce class sizes (West, 1995). However findings from Project STAR, a large scale controlled study of the effects of reduced class size, conducted in 79 state schools in the state of Tennessee from 1985 to 1989 are positive. Within participating schools, children entering Kindergarten were randomly assigned to one of three class sizes – small, (with an enrolment range of 13-17 pupils), regular (with an enrolment range of 22-26) and regular with an additional class room assistant. Teachers were randomly assigned to the class groups. Standardised attainment tests were administered to participating students at the end of each school year. Differences in attainment were highly significant for all attainment measures and the significance was attributable to the superior performance of children in small classes. With minor exceptions, there was no significant interaction with school location or sex of pupil. Indeed, some of the benefits of small classes were greater for minority than non-minority students. In most comparisons the impact on minorities, most of whom were black, was twice as large as it was for white students. This resulted in a considerable reduction in the achievement gap.

Finn and Achilles (1990) noted the differences between minority and white attainment in grade one reading tests was “reduced from 14.3 per cent in regular classes to 4.1 per cent in small classes”. The experiment was followed up in the Lasting Benefits Study. All children returned to normal sized classes in grade four; monitoring of the pupils was maintained. Grade Four evaluations showed that even after the small class intervention had been disbanded, students who had been in small classes had higher achievement in all academic areas compared with students in regular class sizes. The small class effect (small – regular) ranged from 0.11 in social studies to 0.16 in

mathematics. The small class effect of a similar range endured in later grades. In addition pupils were rated as expending more effort in the classroom, and less disruptive behaviour than their peers who been in classes of a regular size. The study provides compelling evidence that small classes in the earlier years of compulsory schooling have significant long term consequences and may help to place children at risk of low educational attainment on a positive trajectory that will increase their chances of school success and subsequently their adult life chances. However given the high costs involved in reducing class size, Slavin (1990) argues that for the equivalent expenditure, more pupils could receive learning support through intervention programmes targeted at individual learners. Analysis of cohort data suggests that reduced pupil-teacher ratios increase educational attainment but are also associated with subsequent adult earnings (Dolton and Vignoles, 1996). The authors summarise:

“Attending a school with lower pupil teacher ratio may increase a child’s human capital and consequently their labour market prospects but this effect will not be a direct one, nor will it solely be via educational attainment.”

Dearden *et al.* (1997) have also found that lower student teacher ratios enhance both the ultimate educational and labour market performance of women in the bottom half of the ability distribution.

4.3.3 TEACHER EFFECTS

On the basis of NCDS analysis, Dearden *et al.* (1997) conclude that teacher quality as reflected by teachers’ salary, is an important factor in determining labour market outcomes among male sample members. Controlling for educational achievement, teacher salary at secondary school level is associated with increased wages among men at ages 23 and 33:

“Teachers paid 10 per cent extra given the cost of living, produce pupils who earn 7% more at 23...better quality teachers offer knowledge and skills that are important to the labour market but are not relevant for obtaining formal qualifications.”

As teachers’ salaries primarily reflect experience, the findings suggest that more experienced teachers may be more effective in developing students soft or personal skills. There are also observable teacher effects on truancy levels (Casey and Smith, 1995). The likelihood of truancy is reduced in schools with higher proportions of graduate teachers and low rates of staff turnover. These factors are thought to affect the quality of teacher/pupil interaction. Gipps and Gilbourn (1996) suggest that some white teachers perceptions and

expectations of Afro Caribbean males, “played an active though unintended role in the creation of conflict with African Caribbean pupil, thereby reducing black young people’s opportunity to achieve”. Research findings suggest that black pupils are subjected to heightened levels of criticism and discipline, often unwittingly, by white teachers. A number of psychological processes – such as learned helplessness, self-fulfilling prophecy and achievement motivation have been suggested in models of how expectations come to affect pupil’s attainment and behaviour. Research by Blatchford *et al.* (1989) based in infant schools has also found sizeable ‘expectation effects’ over the three years of infant school. However the authors suggest expectations affected attainment primarily through more direct channels such as access to and coverage of the curriculum.

4.3.4 CURRICULUM

The national curriculum has been implicated in poor educational attainment and outcomes among certain groups. It is widely acknowledged that the academic curriculum fails to motivate a substantial proportion of pupils. Surveys of pupils’ own views have identified the curriculum as an important cause of truancy (Kinder, 1996; O’Keefe, 1993). The exclusiveness of the national curriculum has been recognised by the Government who have responded with a number of measures including the dis-application of the national curriculum in certain cases to allow greater participation in work-based learning. However to date, these developments are focused on addressing particular groups and there is little indication of a recognition that all young people would benefit from a curriculum which was more closely aligned with the workplace and adulthood in the modern world (Hayton, 1999). Research has shown that previous attempts to modernise the academic curriculum such as the development of TVEI achieved impressive successes. Using YCS data Bosworth (1994) found that holding other factors constant, TVEI significantly raised young peoples examination performance. The net effect was approximately 14 points, although Bosworth suggests that without the inherent disadvantages of the students participating in the project, the effects of TVEI might have been as much as 30 points. In addition, findings suggested that TVEI had a positive impact on pupils’ attitudes to school and attendance. However there are fears that the recognition of a wider range of skills by the formal education system will lead to a situation “where every aspect of people’s lives are under the formal gaze of authority for certification” (Foucault, 1977 in Halsey *et al.*, 1997).

4.3.5 MARKET MECHANISMS

Research suggests that the development of a quasi-market in education has created a powerful set of institutional processes and incentives which work against the goal of an inclusive education system. Key aspects of the reform include the right of parents to express a preference for a school of their choice. In the education quasi-market place, school funding is largely determined by the schools ability to attract pupils, and schools compete with one another for pupils on the basis of published performance indicators (league tables). Research (West *et al.*, 1994) has shown that many parents find the league tables difficult to understand. Such difficulties are concentrated among parents with lower levels of educational attainment. Where the mother was educated to GCE A level, 67 per cent of respondents reported that they understood the league tables; this compared with 31 per cent of respondents where mothers had GCE O level or below. This has significant implications for the equity of informed choice. Research (Noden *et al.*, 1998) on patterns of parental choice at the secondary transfer stage in London found that middle class parents' first choice schools scored more highly in the DfEE's performance tables. Middle class parents identified first choice schools averaging 53 per cent five or more A* – C at GCSE, whilst working class parents chose schools averaging 40 per cent. The realisation of choice is also differentiated by family socio-economic status. Fitz, Halpin and Power's (1993) study of two LEAs found that households in which the father was not in paid employment were the least likely to gain access to their preferred school choice. In contrast those in professional occupations were the most successful.

Critics of the educational market have suggested that the publication of league tables create incentives which encourage cream skinning, whereby schools take actions to maximise their league table position and consequently their market advantage. Work on admissions in the UK suggested cream-skinning has been taking place in some grant maintained and voluntary schools, that have more flexible admissions policies (West *et al.*, 1998). Evidence suggests that some such schools have been covertly or informally selecting pupils who are academically or socially advantaged (West *et al.*, 1998; West and Pennell, 1997; Gerwitz *et al.*, 1995). In addition it has been suggested that the additional application procedures in some of these schools, which may involve application forms and/or interviews, may in themselves operate against particular groups of parents (Gerwitz *et al.*, 1995). Research by the Audit Commission (1996) in this area found that 9 per cent of 1029 parents surveyed did not express their first genuine first choice – the most common reason cited was the belief that their application would not be successful.

Hence, it is argued that the structure of some local quasi-markets may exacerbate segregation of pupils, particularly in urban areas (West *et al.*, 1997; Whitty *et al.*, 1998). This argument is supported by analysis of changes in segregation undertaken by Vandenberghe (1998) in the educational quasi-market in the French Community of Belgium. Vandenberghe argues that regulatory strategies should be implemented to prevent segregation and improve the efficiency of the quasi-market. For example, he suggests the development of differential capitation grants:

“The regulator can steer recruitment practices simply by making the per pupil amount allocated to schools conditional on the socio-economic composition of the school.”

Empirical evidence on the impact of quasi market reforms on segregation in the UK is less clear. Recent work by Gorard and Fitz (1998) has suggested that social polarisation of school intakes has *reduced* in recent years. Analysis in Wales suggests that the spread of pupils eligible for free school meals across schools is now *more* even than it was in 1988. However data for England suggest that segregation in English secondary schools *rose* in the 1994 – 1999 period (Noden, 1999). The impact of market reforms on segregation is an important issue as a body of research evidence shows that the composition of a school’s intake can have a substantial effect on student attainment – the so called “peer effect”. Pupils of average ability attending a school where high proportions of pupils are of high ability tend to attain more highly and have higher earnings as adults than comparable students in classes where there are high proportions of low ability pupils (Robertson and Symonds, 1996; McPherson and Willms, in Halsey *et al.*, 1997). However segregation works in the favour of higher ability pupils as they too attain more highly if educated among high ability children. Similar effects have also been found in relation to high concentrations of students for free school meals.

US research suggests that competition and budgetary devolution is associated with improved school performance (Chubb and Moe, 1990). Research in the England (Bradley, Johnes and Millington, 1999) also indicates that competition has enhanced the technical efficiency of English secondary schools and that the “least efficient schools in 1993 have improved the most over the time period (1993-1997) as the quasi market developed”.⁵ However it

5 It is important to note that Bradley, Johnes and Millington findings are calculated using a technical definition of efficiency – the maximisation of exam performance and attendance rates given various inputs. Such a definition may not be appropriate in the field of education. For example, whilst a school which has a low

has been argued that the method of budgetary devolvement in some Local Education Authorities in England works against schools with disadvantaged intakes. In their analysis of education and homelessness, Whitty *et al.* (1999) highlight the way in which some LMS budgetary formula handicap schools in turbulent areas. The authors explain that some funding formulas are based on a single head count, which is readjusted on the basis of another headcount later in the year. As a result the school rolls of schools in turbulent areas may be underestimated, leading to significant budgetary shortfalls.

5. Education: a strategy to reduce social exclusion?

The role of education in the process of social exclusion has yet to be fully elucidated. The dominant mode of analysis has focused on the concept of human capital. From this perspective education or schooling increases productivity as it equips individuals' with skills and knowledge. As productivity is reflected in earnings and rates of labour market participation, education offers an important means of social mobility, particularly for the poor. Widespread changes in the economy such as the emergence of high-level service sector jobs have opened up important opportunities, to those with the necessary levels of education. The government certainly adopts this perspective. Tony Blair has noted the importance of acquiring education and developing human capital as a route out of social exclusion:

“We should root out educational failure, because it is the greatest inhibition to correcting poverty...in today's world, the more you learn the more you earn.” (“The will to win” speech, June, 1997)

Opponents of the human capital model argue that little of the variation between individual's earnings and labour market participation is explained by education. The ‘signalling’ or ‘screening’ paradigm suggests that the process of education merely serves to identify individual ability or personal attributes. From this perspective the positive correlation between education and income arises because they are commonly founded in an individual's ability. Educational attainment merely allows individuals to signal their high level ability and low prospective training costs to employers. In its most extreme and ‘ideal typical’ form, screening implies that qualifications provide valid information to employers about characteristics of the individual to

rate of success at GCSE and a very low input in terms of proportion of trained staff may be deemed technically efficient, this form of provision is not desirable from a broad policy perspective.

which education does not contribute; education is in effect reduced to a process of assessment. Hence improvements in educational attainment, particularly among the less able will have no effect on the overall distribution of income and unemployment rates. Recent research in the US has rebutted the long-standing criticism of the use of education as a tool to reduce inequality. On the basis of studies of intra-family comparisons and 'natural experiments' in the US, Ashenfelter and Rouse (1999) conclude "the return to schooling is not caused by an omitted correlation between ability and schooling...the school is a promising place to increase the skills and incomes of individuals". Furthermore research in the UK has found no evidence of heterogeneity in the return to schooling completed by the age of 23, according to ability, and family financial circumstance as a child (Dearden *et al.*, 1998). If anything the evidence suggests that those individuals whose parents have low levels of education benefit slightly more from schooling. They found that the estimated return to an additional year of full time education decreases by around 0.23 percentage points for every additional year of father's education. Whilst no economist would subscribe solely to the signalling paradigm, many accept that the screening argument may have some relevance, especially in relation to particular courses.

Other theorists suggest that an increasing supply of qualifications leads to compositional changes in the demand for labour. Employers merely respond to the increased supply of qualifications by raising the qualification levels they ask for as means of screening out large numbers of applicants – otherwise known as the process of credential inflation. Hence differentials between the less and more qualified remain. Educational attainment is devalued as more people achieve a given level, stimulating a further round of contest at a higher level qualification. Recent analysis by Green *et al.* (1998) however rebuts the notion that credentialism has occurred on an economy wide basis but concludes the phenomenon is apparent in some areas such as the real estate industry.

New economic theory provides compelling evidence of the importance of education and training as a strategy to reduce social exclusion. As Glennerster, Noden and Power (1998) outline

"The reason we cannot run nearer to full employment lies in the fact that there are pools of people who are not effectively part of the labour market (Layard, 1997). The Bank of England has to check and turn back the economic tide long before it can ever reach the poorest areas as the labour market tightens and inflation takes off. Macro economic policy is not independent of its micro roots."

However this role must not be overstated. US evidence suggests that raising test scores may not have much impact on worker productivity. Empirical work by Murnane, Willett and Levey (1992, in Hasley *et al.*, 1997) on test scores and earnings suggests that the magnitude of the relationship has grown in recent years yet the statistical relationship between the two remains modest. They found that the wage difference associated with a one standard deviation difference in mathematics test scores rose from 3 per cent in 1978 to 7.4 per cent in 1986 for men and from 8.5 per cent to 15.5 per cent for females. Another study found that only a limited amount of variance in productivity, as observed by supervisors, was associated with test score results.

Analysis of the 1958 NCDS cohort (Gregg and Machin, 1997; Feinstein, 1998) has identified low educational attainment as a key mechanism translating childhood disadvantage into poor social and economic outcomes at the ages of 23 and 33. This suggests that improving educational attainment may reduce the transmission of social exclusion over the life course. However, findings also suggest that education is only part of the story, as childhood deprivation is associated with significant reductions in adult earnings regardless of educational performance.

The effectiveness of education as a means of overcoming social exclusion may be differentiated on the basis of an individual's previous experiences. Using NCDS data, Gregg and Machin (1997) have analysed the extent to which individuals can improve their wages and employment prospects by upgrading their education attainment later in life (between the ages of 23 and 33). In general the results showed that educational upgrading had a positive and significant impact on wages at 33 – of approximately 9 per cent for men and 16 per cent for women. However, men who at 16 had poor school attendance, or who had police contact during their childhood years, saw no improvement in their wages by the time they were 33 from educational upgrading in the ten years prior to this. In terms of employment prospects, educational improvement had no impact for men but was associated with substantial benefits for women. Hence improvements in educational attainment in later life offer scope for improvement among some groups but not for others. These findings raise important conceptual questions about the role of education in the process of social exclusion. However they support rather than undermine the importance of education attainment achieved during the compulsory years of schooling. Getting education right the first time around appears to be important for all, and crucial for some groups of individuals.

Crucially the human capital paradigm is closely tied to the notion of a fair and meritocratic market. Attention is focused on an individual's investment and the impediments which restrict the ability to invest.

Subsequently such analysis tends to ignore the other conditions that are necessary for education to provide high payoffs. Research has drawn attention to the significance of employers and their micro demand for labour. Atkinson (1998) argues,

“The role of employers is, in my view, too little emphasised in today’s economic analysis. In seeking to explain the rise in unemployment, we have to consider the hiring decisions of employers. Are people now being excluded from the labour market by the employment practices of companies?”

Procedures, which discriminate on the basis of address, age, gender and race, prevent individuals with the necessary education and skills from gaining positions in which they can utilise their human capital (Kleinman *et al.*, 1998). In a survey of eight TECs Rolfe *et al.* (1996) found that employer discrimination on the basis of postcode and race, was a major factor constraining the youth training opportunities of young disadvantaged people. They found that despite action by the TECs, employers persisted in labelling disadvantaged trainees as poor achievers and were inclined to use them as sources of cheap labour, rather than an opportunity to offer long term commitment to trainees. From the perspective of trainees, effort and attainment are not rewarded.

Levin and Kelley (1997) stress improving education is only one factor which requires a range of complementary measures in order to provide high payoffs:

“The single factor approach to improving productivity – raising educational levels and test scores – serves to distort both national and industry policies in directions that are unlikely to improve national productivity...What we should be doing is acknowledging the entire range of changes that are necessary to increase national productivity and placing education in that context as only one of the constellation of related and complementary factors in the policy mix.”

The authors highlight the significance of investment, work place organisation and managerial approaches.

6. Some further areas of research

- Soft skills are an important facet of an individual’s human capital, affecting vulnerability to exclusion from the sphere of production.

- However soft skills have yet to be defined, and their importance, relative to formal qualifications, for different groups of people and at different stages of the life cycle is unknown.
- School attendance is also important. Schools with high proportions of free school meal eligibility have only slightly higher levels of measurable truancy, but significantly higher rates of absence. We need to know more about what impedes the attendance of these pupils – poor health, lack of family access to other services or disaffection from the schooling process.
 - Existing literature focuses on the relationship between educational attainment and participation in the sphere of production. We know less about the importance of educational attainment and outcomes for participation in the other spheres identified by Burchardt *et al.* (1998).
 - Non-school factors are of significant importance to educational attainment and outcomes, however we know surprising little about which factors are causally related to which educational attainment and outcomes and which are merely associated. This would be aided by a greater understanding of the processes which link poverty to poor educational outcomes.
 - Parents appear to play an important role in their children's educational attainment. Research needs to clarify exactly how parents are involved and the relative importance of different types of involvement, of mothers and of fathers, for different areas of attainment and at different stages of their children's lives. A greater understanding of the significance of peer groups and of how and why they are important would also be useful.
 - The school effect is better understood. It will be interesting to monitor effects of school based interventions such as breakfast and homework clubs, which address non-school factors (e.g. diet, space to complete homework), on attainment and outcomes.
 - The Government is committed to reducing levels of exclusion from school – will the measures that have been announced be successful?
 - Little is known of the effects of the composition of school intake on management processes, teaching styles and resource allocation at school level.
 - Innovations in the curriculum and teaching methods seem to be an effective means of improving attainment and attendance. It would be useful to evaluate the effectiveness of the different innovations that are currently taking place at a local level.

- Research on the extent of screening and credentials inflation is useful as these have serious implications for the utilisation of education as a strategy to reduce social exclusion.
- We need to gain a better understanding of the role of employers in the social exclusion process. How do their decisions, policies and practices affect educational attainment and the transmission of low educational attainment into poor adult outcomes?

To sum up, the research indicates that schools are a good place to improve children's skills and that poor children benefit differentially more from such improvements. However, if pursued in isolation, the improvement of average school performance is a less effective means of reducing social exclusion than an approach which takes deliberate action and creates incentives that rewards improvement among the least able.

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